UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

August 2, 2004

MEMORANDUM

Subject: Acute Toxicity Review for EPA Reg. No.: 3090-EEN / T99-19 (40%)
DP Barcode: D305004

To: Velma Noble, PM 31 / Tracy Lantz
Regulatory Management Branch
Antimicrobials Division (7510C)

From: Ian Blackwell, Biologist
Efficacy Evaluation Team
Product Science Branch
Antimicrobials Division (7510C)

Through: Karen Hicks, Team Leader
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510C)
8/5/04

Michele E. Wingfield, Chief
Product Science Branch
Antimicrobials Division (7510C)

Applicant: Sanitized, Inc.

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Dimethyl tetradecyl-[3-(trimethyoxysilyl)-propyl] ammonium chloride	40
Other Ingredient(s):	60
Total:	100%

I BACKGROUND: Sanitized, Inc., has submitted a set of three acute toxicity and irritation studies to support the registration of their new product, "T 99-19 (40%)". The studies were conducted by SafePharm Laboratories Limited and RCC Limited. The MRID Numbers are 462804-04 through 462804-06.

No acute dermal toxicity, acute inhalation toxicity or primary eye irritation studies were included with this submission. The registrant is requesting waivers of these three studies based upon the corrosion observed in the primary dermal irritation study. The rationale provided for the waiver of the acute dermal toxicity, acute inhalation toxicity and primary eye irritation studies was that the product produced dermal corrosion in 6/6 animals tested in the primary dermal irritation study.

II RECOMMENDATIONS: PSB findings are:

1 The acute oral toxicity study is acceptable, although it has the deficiency of the lab not having tested enough toxicity categories. As it stands, this product was assigned toxicity category III for acute oral toxicity. Judging by the results of the study (no deaths, no signs of toxicity), it might have been assigned toxicity category IV. CTT/PSB suggests that this product be retested to determine the proper toxicity category of this product (III or IV). **However, we will allow the PM Team to decide if they think that toxicity category III is adequate, or, if they wish to have the lab retest to determine if this product should be assigned toxicity category III or IV.** Either toxicity category will result in the signal word "Caution". However, that signal word is likely to change once the other acute toxicity and irritation studies have been addressed.

2 The primary skin irritation study is unacceptable. The problem with this study is that, according to the report, the exposure sites were wiped with **74% Industrial Methylated spirits** before and after the dosing of the test material. This practice is not one that is in accordance with the Draize Method of assessing primary skin irritation, which is what OPP/EPA uses.

3 The waivers of the acute dermal toxicity, acute inhalation toxicity and primary eye irritation studies are denied. These waivers were to be based upon the results of the primary skin irritation study, which was rejected.

4 The dermal sensitization study is acceptable.

The acute toxicity profile for File Symbol 3090-EEN is currently:

Study	MRID Number	Toxicity Category	Status
acute oral toxicity	462804-04	III	Acceptable
acute dermal toxicity	none	---	Waiver denied
acute inhalation toxicity	none	---	Waiver denied
primary eye irritation	none	---	Waived denied
primary skin irritation	462804-05	---	Unacceptable
dermal sensitization	462804-06	Sensitizer	Acceptable

III LABELING:

No precautionary labeling can be recommended at this time.

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§ 81-1, 870.1100)

Product Manager: 31
MRID No.: 462804-04

Reviewer: I. Blackwell
Study Completion Date: 8/18/2000
Lab Project ID: 502/018

Testing Laboratory : SafePharm Laboratories Limited
Authors : A. Sanders

Quality Assurance (40 CFR §160.12): Included

Test Material: Sanitized T 99-19, "clear yellow liquid"

Species: Sprague-Dawley CD (Crl:CD (SD) IGS BR) strain rat
Age: 8-12 weeks
Weight: males = 205-220 g; females = 202-205 g
Source: Charles River (UK) Ltd

Conclusion:

1. **LD_{50} (mg/kg):** **Males** =
   Females =
   Combined =
2. **The estimated LD_{50} is**
3. **Tox. Category**: **Classification**:

Procedure (Deviations from §81-1):
*Not enough doses were tested to differentiate between category II or IV.

Results:

Dosage (mg/kg)	(Number Deaths/Number Tested)		
	Males	Females	Combined
2,000	0/3	0/3	0/6

Observations: No signs of toxicity were observed.

Gross Necropsy: No abnormalities were observed.

DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5, 870.2500)

Product Manager: 31
Reviewer: Ian Blackwell
MRID No.: 462804-05
Study Completion Date: 11/18/99
Lab Project ID: 502/015
Testing Laboratory: SafePharm Laboratories Limited
Author: A. Sanders

Quality Assurance (40 CFR §160.12): Included

Test Material: Sanitized T 99-19, "pale straw colored liquid"
Dosage: 0.5 mL
Species: New Zealand White rabbits
Age:
Sex:
Weight:
Source:

Summary:

1. **Toxicity Category**:

2. **Classification**: Unacceptable

Procedure (Deviations From §81-5):
*Immediately before treatment on the day of the exposure, the skin on the back of each rabbit was wiped with 74% Industrial Methylated Spirits.
*Twenty-four hours after application, the treated skin sites were swabbed with cotton wool soaked in 74% Industrial Methylated Spirits.
*One of two test sites on each rabbit was abraded.

Results:

Special Comments:

DATA REVIEW FOR DERMAL SENSITIZATION TESTING (§81-6, 870.2600)

Product Manager: 31
MRID No.: 462804-06

Reviewer: I. Blackwell
Study Completion Date: 9/1/2000
Lab Project ID: 502/020

Testing Laboratory: SafePharm Laboratories Limited
Author: A. Sanders

Quality Assurance (40 CFR §160.12): Included

Test Material: Sanitized T 99-19, "clear yellow liquid"
Positive Control Material:

Species: Dunkin Hartley albino guinea pig
Weight: 372-513 g **Age**: 8-12 weeks
Source: David Hall Limited, UK

Method: Buehler Method

Summary:

1. **This Product is a dermal sensitizer.**

2. **Classification**: Acceptable

Procedure (Deviation From §81-6):

Procedure: The test material was applied undiluted for induction and diluted 75% and 50% in aqueous ethanol for challenge.

Induction: a cotton lint patch was saturated with the undiluted test materia and applied to the test site. It was held in place with a strip of surgical tape and covered with an overlapping length of aluminum foil. It was further secured by a strip of elastic adhesive bandage. The application was kept in place for 6 hours. This induction procedure was repeated on the same site on Days 7 and 14 of the study.

Challenge: On Day 28 of the study, the test material-induced animals were challenged with 75% test material in 80% ethanol (the HNIC). This dosage was applied for 6 hours.

Results:

Induction: After induction treatment #1, 3/20 test material-induced animals displayed moderate and confluent erythema and 14/20 discrete or patchy erythema. After induction treatment #2, 14/20 displayed moderate erythema, 4/20 patchy erythema, 3/20 slight edema, 10/20 very slight edema, 3/20 desquamation, 9/20 crust formation and 2/20 "adverse reactions". After induction treatment #3, 10/20 had moderate erythema, 9/20 patchy erythema, 2/20 slight edema, 8/20 very slight edema, 4/20 desquamation, 2/20 small superficial scattered scabs, and 1/20 hardened light colored scab.

Challenge: Twenty-four hours after challenge with 50% test material, no irritation was observed. Twenty-four hours after challenge with 75% test material, 6/20 test material induced animals displayed patchy erythema. Twenty-four hours after challenge, no irritation was observed in the control group.